

## MASSACHUSETTS RARE AND ENDANGERED PLANTS

### ARETHUSA

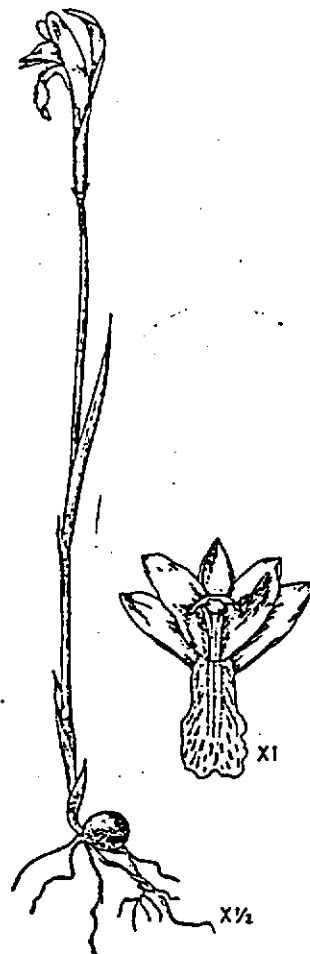
(Arethusa bulbosa L.)

#### DESCRIPTION

*Arethusa* is a showy perennial orchid usually 4 to 11 inches tall (10 to 30 cm). Out of the bulbous corm (a thick, fleshy root stalk) grows a single erect stem topped by one, or sometimes two, magenta to dark pink flowers. The lowest petal, or lip (about an inch long), arches abruptly downwards and its whitish convoluted surface is mottled with magenta and yellow. The flower is pollinated by bumblebees of the genus *Bombus*. In Massachusetts, flowering occurs from late May to mid-June. After the flower has wilted, a single sharply pointed leaf grows from the uppermost scale on the stem, becoming about 6 inches long and  $\frac{1}{2}$  inch wide (15 by 1.2 cm). Still later in the year, a fruiting capsule is sometimes seen on the dried stalk. The capsule is elliptical, 1 inch long, and has 6 pronounced ribs.

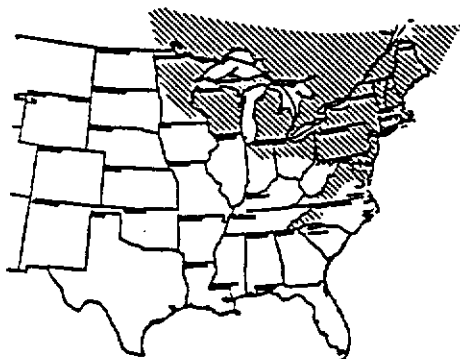
#### SIMILAR SPECIES IN MASSACHUSETTS

Rose Pogonia (*Pogonia ophioglossoides*) is similar but has a number of differences. The flowers of Rose Pogonia are shades of pink, rather than magenta. Two of its outer "petals" (actually pink-colored sepals) point sideways or downward rather than upward, and the lip is deeply fringed along the margin. Additionally, the Rose Pogonia has a leaf-like bract growing from the base of the flower which is not present in *Arethusa*.

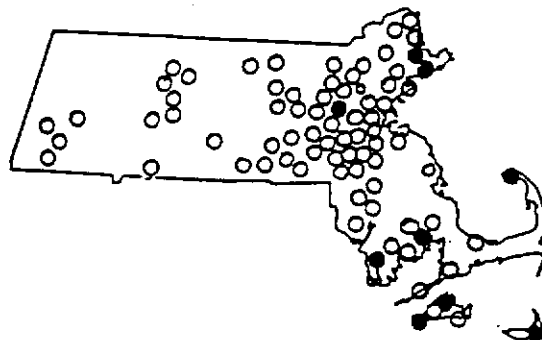


Gleason, H.A. The New Britton and Brown  
Illustrated Flora of the Northeastern U.S.  
and Adjacent Canada. New York Botanical  
Garden, 1952.

(continued overleaf)



Distribution of *Arethusa*



● Verified since 1978  
○ Reported prior to 1978

Distribution in Massachusetts by Town

### HABITAT IN MASSACHUSETTS

*Arethusa* is found in open peaty wetlands, bogs, boggy meadows, and inter-dune swales, usually with cranberry, sphagnum moss, sundews, Rose Pogonia, sedges, and shrubs such as Sheep Laurel and Swamp Azalea. *Arethusa* prefers open, early successional habitats but may persist in the shade of shrubs.

### RANGE

*Arethusa* is distributed from Newfoundland west to southern Manitoba, south to Delaware, northern Indiana and Minnesota. It is found sporadically further south in the Appalachian Mountains to South Carolina.

### POPULATION STATUS

*Arethusa* is classified as a "Threatened" species in Massachusetts. It is rare throughout its range except locally in Maine, the Great Lakes states, and eastern Canada. It has been extirpated from Delaware and Maryland. Populations of *Arethusa* apparently vary greatly in number of plants from year to year.

Currently (since 1978), there are 11 sites in Massachusetts where this species is known to occur. Historically (prior to 1978) it was known from an additional 87 locations. It is declining in apparently suitable habitat in inland bogs for reasons that are not known. The species does not appear to be declining as rapidly in the coastal boggy areas.

There are a number of known threats to its existence. Destruction of wetland habitat by drainage and conversion for other uses is reducing available habitat. Further loss of habitat is occurring through ecological succession of bogs and meadows to Red Maple swamps and shrub swamps. Coastal storms and hurricanes frequently eliminate habitat in the interdune swales but can create new habitat where dunes are undeveloped. Over collection has also contributed to the scarcity of this native orchid.